

## SCOPE OF FOUNDATION ENGINEERING SERVICES ( IB 500 Isolation System )

### BASIS OF PROPOSAL: **SAMPLE**

This scope includes all work necessary to provide a set of construction documents for construction of the press foundation per the following scope. Construction documents shall include:

- General layout of the foundation and references to existing facilities.
- Provisions for Unisorb IB-500 isolation system around inertia block.
- Provisions for Quantum Press Mounts under press.
- Complete details for construction of foundation.
- Specifications for concrete work and coordination with geotechnical engineer for earthwork.
- This scope is limited to the area within the footprint of the foundation. Design considerations for altering or making provisions for existing facilities are not included in this proposal.
- This scope is limited to the installation of a single machine foundation.
- On-site technical support for installation of Unisorb products.

### THIS SCOPE SPECIFICALLY INCLUDES:

#### Foundation Design:

Unisorb will coordinate the various aspects required for proper foundation design. This includes:

- Perform structural design of foundation.
- Coordinate design with geotechnical survey.
- Coordinate vibration isolation with foundation.
- Design the foundation to maximize economy of construction materials and construction methods.

#### Construction Drawings:

Unisorb will assemble construction documents to be used for construction of the foundation.

Document preparation will include:

- General layout of machine within building. Providing general information such as:
  - Proposed utility locations.
  - Control points.
  - Existing construction (columns, footings, walls, underground utilities, etc.).
- Layouts showing:
  - Elevations and dimensions of the concrete foundation.
- Sections showing:
  - Concrete thickness.
  - Reinforcing.
  - Connections to existing construction.
  - Miscellaneous details for dowels, inset steel fabrications, etc.

- Isolation details. Detail isolation system and provide installation instructions.
- Identify responsible parties for rigging, press mount installation and leveling.
- Professional Engineer's Seal (State of Wisconsin).

#### **Construction Specifications:**

- Prepare specifications for concrete construction, specifying:
  - Material quality and quantity of concrete components.
  - Concrete design mixes.
  - Concrete admixture quality and usage.
  - Hot/cold weather requirements.
  - Quality control.
  - Concrete finishes.
  - Concrete curing.

#### **THIS PROPOSAL DOES NOT INCLUDE:**

- Professional Engineer's Seal is not included, and available at additional cost.
- Vibration Survey.
- Machine Survey. Information for this design will be obtained from Machine Drawings. **It is recommended that dimensions on Machine Drawings be compared with actual machine dimensions to verify the Machine Drawings are correct.**
- Geotechnical Services.
- Special foundation considerations and/or unforeseen conditions are not included in this project (piling, soil stabilization, rock outcroppings, unknown utilities, etc.). It is the customer's responsibility to assure that existing soil conditions will provide adequate support for a mat type foundation.
- Pit in inertia block beneath press. If pit is required, add \$500 for pit provisions and floor plate design/detailing.
- Specifications other than those noted above.
- Bidding Instructions and Contract Documents.
- Foundation construction, rigging, or machine installation of the machine.
- Design or detailing of utilities (air, electric, etc.).
- Engineering field trips. Cost for field trips will be billed as follows:
  - Base rate: \$100/hour; Expenses not included.  
Minimum 1 day @ 8 hrs., Monday through Friday.  
Over 8 hours or Saturday, 1.5 times base rate. Sunday or Holiday, 2 times base rate.
  - Expenses: Billed at cost portal to portal. Typical expenses include mileage, parking, airfare, auto rental, lodging, meals, etc.
- Review of Shop Drawings. If shop-drawing review is required for this project, Unisorb will bill the Owner an additional \$85/hr required for shop drawing review.
- Any retrofitting of existing foundations, floors, buildings, etc. required unless specifically included above.

**OWNER TO PROVIDE:**

- Machine drawings and other machine information required for this design.
- Drawings of the existing facility at the location of the machine installation.
- Geotechnical Information.

**COORDINATION:**

- Prepare construction documents for the entire project to the extent of obtaining accurate, complete, and competitive bids.
- Prepare one set of documents that can be used by Owner, foundation contractor, rigger, and installer for coordination of the complete project.
- Instruct the installer on proper installation techniques for Unisorb products.

**PROJECT SCHEDULE FOR ENGINEERING SERVICES:**

This project is expected to be performed in three stages: Preliminary Documents, Final Review Documents, and Construction Documents.

**Preliminary Documents:**

These documents will coordinate all items in the Scope of Work into a set of drawings. Drawings will have limited detail. This stage has the specific purpose of ensuring the Scope of Work provides a workable solution to the machinery installation, and ensures the project documents have incorporated all of the Owner's requirements for the project. Owner is responsible for reviewing the documents to ensure the documents reflect all requirements stipulated in the Scope of Work. Major changes may require renegotiating the Contract according to a new scope followed by a re-issuance of the Preliminary Documents.

**Final Review Documents:**

After the Owner approves of Preliminary Documents, the project will extend into the Final Review Document stage. In this stage, Unisorb will thoroughly detail the drawings, and assemble the Specifications. After this work is performed, the Final Review Documents will be submitted to the Owner for review. If the review requires changes that affect the Scope of Work, the project may return to Preliminary Documents stage. If a return to the Preliminary Document stage is required, the Owner may be charged for costs associated with the re-issuance of Preliminary Documents.

**Construction Documents:**

In this last phase Unisorb takes the Owner's mark-ups of approved Final Review Documents and incorporates them into the Project Documents and reissues the documents as Construction Documents. After the Owner's approval of Construction Documents, the documents are ready for distribution and construction can proceed.

**Anticipated Schedule:**

- Preliminary Documents: 2 weeks
- Final Review Documents: 3 weeks
- Construction Documents: 1 week

This scope is contingent upon the availability of information required to perform the scope of work. Delays in obtaining information will directly affect this schedule. Once we have the opportunity to discuss a schedule for this work, a formal schedule can be assembled and issued for your review. Design services will commence upon receipt of your purchase order along with items listed under "Owner to Provide". Schedule is subject to revision after 30 days from date of proposal.